PTO/SB/08a (05-07)
Approved for use through 09/30/2007. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

	Application Number		10828935	
	Filing Date		2004-04-21	
INFORMATION DISCLOSURE	First Named Inventor	Gore	enstein	
STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Art Unit		1639	
(Not for Submission under 57 Of K 1.55)	Examiner Name	Wes	sendorf, T. D.	
	Attorney Docket Numl	er	UTMB:1024	

					U.S.I	PATENTS			Remove		
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue D	ssue Date of cited Document Relevan			Lines where ges or Relev			
	1										-
If you wisl	h to a	l dd additional U.S. Patei	nt citatio	n inform	ation pl	ease click the	Add button.		Add		
			U.S.P	ATENT	APPLI	CATION PUB	LICATIONS		Remove		
Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publica Date	tion	Name of Pate of cited Docu	entee or Applicant iment	Releva		Lines where ges or Relev	
	1										
If you wisl	n to ac	Ldd additional U.S. Publi	shed Ap	plication	citatio	information p	olease click the Add	button	Add		
				FOREIG	N PAT	ENT DOCUM	IENTS		Remove		
Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²		Kind Code ⁴	Publication Date	Name of Patentee Applicant of cited Document	or v F	vhere Rel	or Relevant	T5
th	1	2004/026260	WO		A2	2004-04-01	WILSON, et al.				
	2	2005/003291	WO		A2	2005-01-13	GORENSTEIN, et a	al.			
	3	2005/018357	wo		A2	2005-03-03	GORENSTEIN, et a	si.			

Application Number		10828935			
Filing Date		2004-04-21			
First Named Inventor	Gore	enstein			
Art Unit	•	1639			
Examiner Name Wess		sendorf, T. D.			
Attorney Docket Number		UTMB:1024			

	,			,						
Taw	4	2005/032455	wo	A2	2005-04-14	GORENSTEIN, et al.				
Tal	5	2005/037053	wo	A2	2005-04-28	GORENSTEIN, et al.				
If you wis	h to a	dd additional Foreign P	atent Document	citatio	n information p	lease click the Add buttor	Add	l		
			NON-PATE	NT LIT	ERATURE DO	CUMENTS	Remove			
Examiner Initials*	Cite No	Include name of the a (book, magazine, jour publisher, city and/or	nal, serial, symp	osium,	catalog, etc), (the article (when appropi date, pages(s), volume-is	riate), title of the item sue number(s),	T 5		
TOW	1	Partial Supplementary European Search Report for Application No. 04776088.9 (PCT/US2004/016246) dated 29 June 2007								
	2	Partial Supplementary E 2007	uropean Search F	Report fo	or Application No	o. 04809405.6 (PCT/US2004	4/016061) dated 3 July			
	3	BANE, et al., "DNA affin Nuceic Acids Research	ity capture and pro (2002), 30:e69	otein pro	ofiling by SELDI-	TOF mass spectrometry: ef	fect of DNA methylation,"			
	4	DICK, et al., "Aptamer-E (2004), 76:3037-3041	nhanced Laser D	esorptio	n/lonization of A	ffinity Mass Spectrometry,"	Analytical Chemistry			
	5	WANG, et al., "Identification of Proteins Bound to a Thioaptamer Probe on a Proteomics Array," Biochemical and Biophysical Research Communications (2006), 347:586-593								
If you wis	h to a	dd additional non-paten	t literature docu	ment c	itation informat	ion please click the Add b	outton Add			
			EX	AMINE	R SIGNATUR	E				
Examiner	Signa	iture T. D	» J			Date Considered	9/29/07			
*EXAMIN citation if	ER: In not in	itial if reference consid- conformance and not c	ered/whether or considered. Incl	not cit ude cop	ation is in conf by of this form	ormance with MPEP 609 with next communication	. Draw line through a to applicant.			

PTC/SB/08a (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

	Application Number		10828935	
INFORMATION DISCLOSURE	Filing Date		2004-04-21	
INFORMATION DISCLOSURE	First Named Inventor Gorer		orenstein	
STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Art Unit		1639	
(Not for Submission under 57 OF (1.55)	Examiner Name Wess		endorf, T. D.	
	Attorney Docket Num	per	UTMB:1024	
	, morrier booket runn		O T WID. 1024	····

				Remove			
Examir Initial*		Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
The)	1	5270163		1993-12-14	GOLD, et al.	
		2	5475096		1995-12-12	GOLD, et al.	
		3	5582981		1996-12-10	TOOLE, et al.	
		4	5639603		1997-06-17	DOWER, et al.	
		5	5663153		1997-09-02	HUTCHERSON, et al.	
•	,	6	5668265		1997-09-16	NADEAU, et al.	
		7	5670637		1997-09-23	GOLD, et al.	
		8	5696249		1997-12-09	GOLD, et al.	

Application Number		10828935
Filing Date		2004-04-21
First Named Inventor	Gore	nstein
Art Unit	<u></u>	1639
Examiner Name Wess		sendorf, T. D.
Attorney Docket Number		UTMB:1024

TOW	9	5756291		1998-05-26	GRIFFIN, et ai.	
1000						
1	10	5801154		1998-09-01	BARACCHINI, et al.	
	11	5844106		1998-12-01	SEELA, et al.	
	12	9171792	B2	2001-01-09	BRENT, et al.	
-	13	6180348	B1	2001-01-30	LI	
٨	14	6346611	B1	2002-02-12	PAGRATIS, et al.	
	15	6369206	B1	2002-04-09	COLE, et al.	
	16	6514948	B1	2003-02-04	RAZ, et al.	
t	17	6551795	B1	2003-04-22	RUBENFIELD, et al.	
	18	6610504	B1	2003-08-26	YUAN	
-1	19	6713616	B2	2004-03-30	PAGRATIS, et al.	

Application Number		10828935		
Filing Date		2004-04-21		
First Named Inventor	Gorer	nstein		
Art Unit		1639		
Examiner Name Wess		sendorf, T. D.		
Attorney Docket Number		UTMB:1024		

The	20	6867289									
If you wish	f you wish to add additional U.S. Patent citation information please click the Add button. Add Add										
	U.S.PATENT APPLICATION PUBLICATIONS Remove										
Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear					
the	1	20010014461	A1	2001-08-16	HUTCHENS, et al.						
	2	20010014479	A1	2001-08-16	HUTCHENS, et al.						
V	3	20010034330	A1	2001-10-25	KENSIL						
gi	4	20030133229	A1	2003-07-31	KLINMAN, et al.						
) i	5	20030162190	A1	2003-08-28	GORENSTEIN, et al.						
	6	20030162216	A1	2003-08-28	GOLD, et al.						
\downarrow	7	20030186906	A1	2003-10-02	SCHLINGENSIEPEN, et al.						
If you wish	to ac	dd additional U.S. Publis			n information please click the Add	button. Add Remove					

Application Number		10828935			
Filing Date		2004-04-21			
First Named Inventor	Gorer	nstein			
Art Unit	•	1639			
Examiner Name Wess		endorf, T. D.			
Attorney Docket Number		UTMB:1024			

Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ² i	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T5		
THU	1	94/01550	wo	A1	1994-01-20	AGRAWAL, et al.	;			
	2	0 855 184	EP	A1	1998-07-29	LIPFORD, et al.				
	3	99/54506	wo	A1	1999-10-28	u				
l	4	00/24404	wo	A1	2000-05-04	GORENSTEIN, et al.				
If you wis	n to ac	ld additional Foreign P	atent Document	citation	information pl	lease click the Add buttor	Add			
			NON-PATE	NT LITE	RATURE DO	CUMENTS	Remove			
Examiner Initials*	Cite No		nal, serial, symp	osium,	catalog, etc), o	the article (when approp date, pages(s), volume-is		T 5		
Thu	1	AMARZGUIOUI, M., et a in a siRNA	al., Nuc Acids Res	, 31, 589	-595, (2003) – ⁻	Tolerance for mutations and	I chemical modifications			
	2	ANDREOLA, M., et al., 'Phosphorothioate Nucle	Towards the Selection	ction of F Journal	Phosphorothioa of Biochemistry	te Aptamers: Optimizing In v 267:5032-5040	Vitro Selection Steps with			
	3		BRAASCH, D.A., et al., Nucleic Acids Res, 30(23), 5160-7 (2002) -Antisense inhibition of gene expression in cells by oligonucleotides incorporating locked nucleic acids: effect of mRNA target sequence and chimera design							
	4	BRAASCH, D.A. AND D strategies for controlling		nemistry,	41, 4503-4510	(2002) - Novel antisense a	nd peptide nucleic acid			

Application Number		10828935	
Filing Date		2004-04-21	
First Named Inventor Gorer		enstein	
Art Unit		1639	
Examiner Name Wess		sendorf, T. D.	
Attorney Docket Number		UTMB:1024	

T	an	5	CAPLEN, N.J., et al., PNAS, 98, 9742-9747 (2001) – Specific inhibition of gene expression by small double-stranded RNAs in invertebrate and vertebrate systems.	
	۸	6	CASSIDAY, L., et al., "In Vivo Recognition of an RNA Aptamer by its Transcription Factor Target," Biochemistry (2001), 40:2433-3438	
	ž	7	CHI, J.T., PNAS,100(11), 6343-6 (2003) - Genomewide view of gene silencing by small interfering RNAs.	
ŧ		8	DOUCETTE, et al., Proteomics (2001), 1:987-1000, Investigation of the Applicability of a Sequential Digestion Protocol Using Trypsin and Leucine Aminopeptidase M for Protein Identification by Matrix-Assisted Laser Desorption/Ionization-Time of Flight Mass Spectrometry	
•		9	ELBASHIR, et al., "RNA Interference is Mediated by 21- and 22- nucleotide RNAs," Genes and Development (2001), 15:188-200	
		10	ELBASHIR, et al., "Functional Anatomy of siRNAs for Mediating Efficient RNAi in Drosophilia melanogaster Embryo Lysate," EMBO Journal (2001), 20:6877-6888	
ž		11	ELGEMEIE, "Thioguanine, Mercaptoputine: Their Analogs and Nucleosides as antimetabolites," Current Pharmaceutical Design (2003), 9:2627-2642	
l		12	FIRE, et al., Nature, 391, 806 (1998) – Potent and specific genetic interference by dsRNA in C.elegans	
٤		13	GITLIN, L., et al., Nature, 418, 430-434 (2002) – Short interfering RNA confers intracellular antiviral immunity in human cells.	
		14	HU, W., et al., Curr Biol, 12, 1301-1311 (2002) – Inhibition of retroviral pathogenesis by RNA interference.	
,		15	JACKSON, A.L., et al., Nat Biotech, 21(6), 635-637 (2003) – Expression profiling reveals off-target gene regulation by RNAi.	

Application Number		10828935
Filing Date		2004-04-21
First Named Inventor Goren		nstein
Art Unit		1639
Examiner Name Wess		sendorf, T. D.
Attorney Docket Number		UTMB:1024

		,		
-td	W	16	JACQUE, J.M., et al., Nature, 418, 435-438 (2002) – Modulation of HIV-1 replication by RNA interference.	
		17	JANSEN, B. AND U. ZANGEMEISTER-WITTE, Lancet Oncol, 3, 672-683 (2002) – Antisense therapy for cancerthe time of truth.	
		18	KANAORI, et al., "Effect of Phosphorothioate Chiraliy on i-Motif Structure and Stability," Biochemistry (2004), 43:5672-5679	
Ŷ		19	KAWASAKI, H., et al (Taira), Nuc Acids Res, 31(3), 981-987 (2003) – siRNAs generated by recombinant human Dicer include specific and significant but target site-independent gene silencing in human cells.	
		20	KING, D. et al., "Combinatorial Selection and Binding of Phosphorothioate Aptamers Targeting Human NF-kappa B RelA (p65) and p50," Biochemistry (2002), 41:9696-9706	
		21	KING, D.J., "Selection, Binding and Design of Phosphorothioate Duplex Aptamers for the Transcription Factors NF-IL6 and NP-KB," dissertation August 2001	
٩		22	KOLLER, E., et al., Trends Pharm Sci, 21, 142-148 – Elucidating cell signaling mechanisms using antisense technology.	
į,	i	23	LESCAR, J., et al., Cell 105(1), 137-48. (2001) - The fusion glycoprotein shell of Semliki Forest virus: an icosahedral assembly primed for fusogenic activation at endosomal pH.	
•		24	MCCAFFREY, A.P., et al., Nat Biotechnol, 21(6), 639-44 (2003) - Inhibition of hepatitis B virus in mice by RNA interference	
	,	25	MILLER, V.M, et al., PNAS, 100(12), 7195-200 - Allele-specific silencing of dominant disease genes	
\	v)	26	NOVINA, C.D., et al., Nat Med, 8, 681-686 (2002) – siRNA-directed inibition of HIV-1 infection	

Application Number		10828935	
Filing Date		2004-04-21	
First Named Inventor Goren		nstein	
Art Unit		1639	
Examiner Name Wess		endorf, T. D.	
Attorney Docket Number		UTMB:1024	

T	JW)	27	OPALINSKA, et al., Nature Reviews (2002), 1:503-514., Nucleic-Acid Therapeutics: Basic Principles and Recent Applications	
	,	28	PARRISH, S., et al (Fire research group), Mol Cell, 6, 1077-87 (2001) – Functional anatomy of a dsRNA trigger: differential requirement for the two trigger strands in RNA interference.	
(ı	29	PLETNEV, S.V., et al., Cell 105(1), 127-36 (2001) - Locations of carbohydrate sites on alphavirus glycoproteins show that E1 forms an icosahedral scaffold.	
	۸	30	RAVEH, S., "Peptidic Determinants and Structural Model of Human NDP kinase B Bound in Single-Stranded DNA," Biochemistry (2001), 40:5882-5893	
		31	SAZANI, et al., "Nuclear Antisense Effects of Neutral Anionic and Cationic Oligonucleotide Analogs," Nucleic Acids Research (2001), 29:3965-3974	
		32	SEMIZAROV, D., et al., PNAS, 100(11), 6347-52 (2003) - Specificity of short interfering RNA determined through gene expression signatures.	
٨		33	SONG, E., et al., Nat Med, 9, 347-351 (2003) – RNA interference targeting Fas protects mice from fulminant hepatitis.	
P		34	SONG, E., et al., J Virol. 2003 Jul;77(13):7174-81 (2003) - Sustained small interfering RNA-mediated Human Immunodeficiency Virus Type 1 inhibition in primary macrophages.	
		35	UEDA, TAKUYA, et al. (1991) Phosphorothioate-containing RNAs show mRNA activity in the prokaryotic translation systems in vitro. Nucleic Acids Research, Vol. 19, No. 3, pp. 547-552.	
		36	XIA, H.B. et al. Nat Biotech, 20, 1006-1010 (2002) – siRNA-mediated gene silencing in vitro and in vivo.	
,		37	YANG, X., et al., "Construction and Selection of Bead-Bound Combinatorial Olignucleoside Phosphorothioate and Phosphoroditihioate Aptamer Libraries Designed for Rapid PCR-Based Sequencing," Nucleic Acid Research (2002), 30:132-140	

Application Number		10828935
Filing Date		2004-04-21
First Named Inventor Gorer		enstein
Art Unit		1639
Examiner Name	Wes	sendorf, T. D.
Attorney Docket Number		UTMB:1024

ta	38	YOKOTA, T., et al. (Taira), EMBO Rep., 4(6), 602-60 and vector-derived small interfering RNAs.	8 (2003) – Inhibition of intracellular hepat	titis C virus by synthetic		
	39	ZHANG, HAIDI, et al. (2004), Single Processing Center Models for Human Dicer and Bacterial RNase III. Cell, Vol. 118, pp. 57-68.				
If you wis	h to ac	dd additional non-patent literature document citati	on information please click the Add b	outton Add		
		EXAMINER	SIGNATURE			
Examiner	Examiner Signature $f \cdot \mathcal{O}$ Date Considered $9/29/07$					
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.						
Standard ST	F.3). ³ F cument	of USPTO Patent Documents at <u>www.USPTO.GOV</u> or MPEP of Japanese patent documents, the indication of the year of the total to the document under t	he reign of the Emperor must precede the ser	rial number of the patent doc	ument.	